ENVIRONMENTAL
Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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Acquiring a Dam

Acquiring and owning a dam, even a small one, can be an expensive undertaking that binds the owner to long-term obligations and expenses. The acquisition process should be orderly, with a careful investigation of the costs and benefits forming a solid basis for making a decision regarding owning a dam.

Potential dam owners should be aware of the legal duties, obligations, and liabilities that arise from ownership, operation, maintenance, emergency preparedness, and inspection of dams. It is important that the prospective dam owner gather as much information as possible about an existing dam **before** making a decision on acquisition, and advice should be sought from professional or legal sources. The Department of Environmental Services may have specific information on the dam in its files that may be reviewed.

The prospective dam owner should consider, among other things, the following:

Project description. Obtain basic information on the dam, for example, where it is, what it is, and how big it is. Types of information should include dimensions, storage, pond surface area, type of construction, location, and age.

Legal Advice. Obtain competent legal advice on all aspects of acquiring and owning a dam.

Project Records. Obtain copies of all project records that may be available. These could include construction plans and specifications, design documents, instrumentation and operating records, inspection reports, engineering studies and other pertinent materials.

Initial Inspection and Evaluation. Contact a competent engineering firm and indicate that you are possibly acquiring a dam and request an inspection prior to the purchase. They will determine what needs to be done to bring it up to an acceptable condition, a condition that will allow the dam and impoundment to be used as intended and to provide adequately for public safety. DES suggests that you have them coordinate with us to ensure that their recommendations are consistent with current dam safety standards. DES and the engineer should look at the following general areas.

- *Downstream Hazard Classification.* Dams are classified according to their potential for causing loss of life, property damages and other losses in the event of a failure. The current downstream hazard classification should be obtained as well as information on how and when the classification was determined. Is there an Emergency Action Plan (EAP)?

- *Structural soundness.* Is the dam, its foundation and abutments in good condition and stable under normal and maximum operating conditions including hydraulic loading and seepage conditions?

- *Hydraulic adequacy of the spillway(s).* Can the spillway(s) safely and reliably pass a design flood meeting modern standards without damaging or overtopping the dam?

- *Outlet works.* Is there a reliable and operational low level outlet to drain the pond for inspection, maintenance or project safety?

- *Maintenance.* What is the state of project maintenance and what maintenance tasks have been deferred.

- *Site safety and security.* Are hazards to operating personnel and site visitors minimized?

- *Seismic stability.* For significant and high hazard dams an investigation of the dam for stability under earthquake conditions may be necessary if the dam was constructed by the hydraulic- or semi-hydraulic fill methods. In some cases foundation soils could also be a problem. Dams constructed by these methods or on certain foundations may be subject to liquefaction during strong ground motion.

Real Estate and Water Rights. It is important that the dam owner obtain sufficient lands and water and other rights for construction, operation, maintenance, access, flowage and inspection of the dam. Are there any other land owners or others who have water, mill, flowage or other rights at the dam? A complete title search and boundary survey should be performed.

Cost of Ownership. Dam owners should consider all of the costs of dam ownership including:

- *Maintenance Cost.* Plan for such routine expenses as mowing; clearing debris from spillways, outlets and gates; painting; trash pickup; as well as unscheduled major maintenance and repairs.

- *Operating Cost.* Determine how often the gates need to be operated, i.e. seasonally, in times of floods, or more often. New Hampshire's Dam Safety rules require a dam owner to have someone available to respond within two hours. There could be cost associated with complying with this requirement. Include planning for lands management costs such as boundary maintenance and oversight.

- *Replacement Cost*. The remaining life of all of the project elements should be estimated and plans made to pay replacement costs.

- *Insurance Cost*. Insurance for the dam and for the owner's liability may be available. Consideration should also be given to evaluation of uninsured risks.

- *Taxes.* Local property taxes should be considered.

- *Annual Dam Registration Fees*. Hazardous dams have an annual fee that is determined by the hazard classification of the dam. This fee is due January 1 of each year.

Regulatory Environment. Many aspects of dam ownership are regulated by the state and federal government. Regulatory issues may include:

- *Operational Responsibilities*. Are there any permits, orders or other legal requirements for

water level regulation, minimum stream flows, flood control or other activities or uses of the dam and pond?

- *Permits*. Construction, reconstruction, alterations and other changes, including breaching or removal, may require permits from state, local or federal governments. It is important that any such permits be identified. Both construction *and removal* may present significant concerns.

- *Uses*. How is the dam and pond currently used by the owner, public or others? Will the dam and pond serve the prospective owner's intended uses as regulated?

- *Compliance With Directives from State or Federal Dam Safety Inspections.* After an inspection of a dam there are generally recommendations or requirements for corrections of deficiency's found during the inspection.

For more information relative to the design, construction, maintenance and operation of dams, please contact the DES Water Division Dam Bureau at (603) 271-3406 or email damsafety@des.state.nh.us. General information is available at www.des.nh.gov/Dam/. You may also visit our office at 29 Hazen Drive in Concord, New Hampshire.